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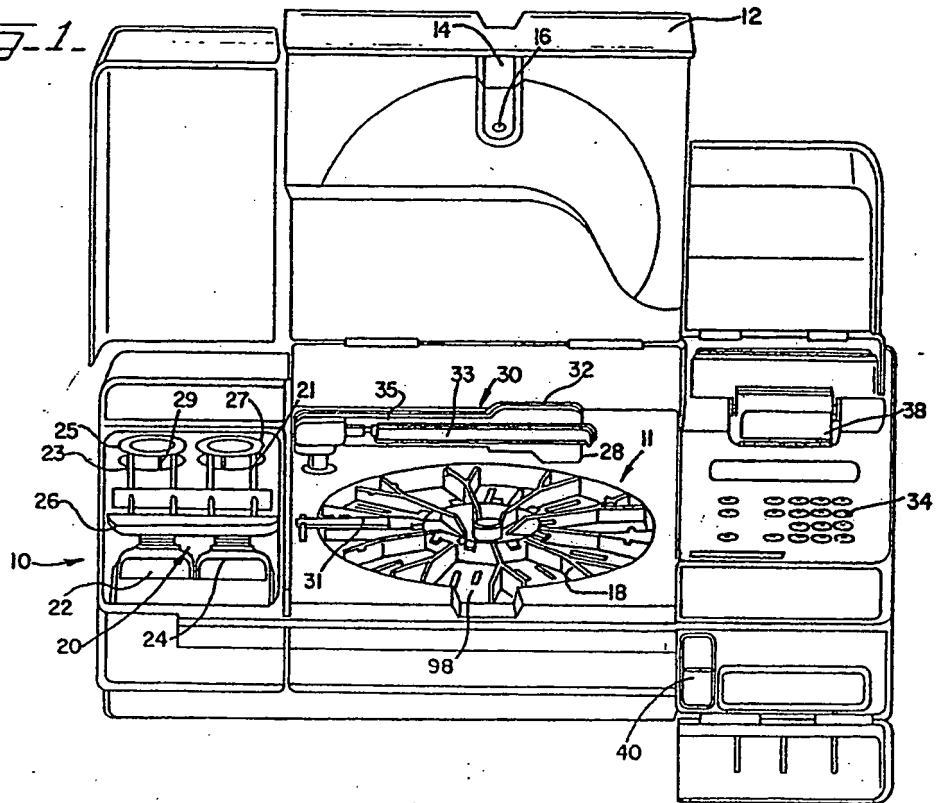
(54) Reaction cartridge and carousel for biological sample analyzer.

(57) A semi-automated biological sample analyzer and subsystems are provided to simultaneously perform a plurality of enzyme immuno assays for human IgE class antibodies specific to a panel of preselected allergens in each of a plurality of biological samples. A carousel is provided to position and hold a plurality of reaction cartridges. Each reaction cartridge includes a plurality of isolated test sites formed in a two dimensional array in a solid phase binding layer contained within a reaction well which is adapted to contain a biological sample to be assayed. The carousel and cartridges contain struc-

tures which cooperate to precisely position the cartridges in each of three separate dimensions so that each cartridge is positioned uniformly. An optical reader operating on a principle of diffuse reflectance is provided to read the results of the assays from each test site of each cartridge. Also provided is a subsystem which provides predetermined lot-specific assay calibration data which is useful for normalizing the results of various assays with respect to predetermined common standard values.

EP 0 353 592 A3

FIG. 1.





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EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
P,A	WO-A-8 808 538 (TANOX BIOSYSTEMS) * Page 13, line 25 - page 14, line 31 *	1,2	G 01 N 35/02 B 01 L 3/00
A	EP-A-0 217 000 (ABBOTT LABORATORIES) * Page 10, line 21 - page 11, line 23; page 13, line 27 - page 15, line 27 *	1,2,5	
A	EP-A-0 192 968 (FISHER SCIENTIFIC) * Page 7, line 1 - page 8, line 27; page 11, line 18 - page 12, line 18; figures 1,3,10,11 *	1,2,5,7	
A	US-A-4 738 825 (N.G. KELLN et al.) * Column 3, line 61 - column 4, line 22; column 5, lines 1-42 *	1,5	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			G 01 N 33/00 G 01 N 35/00 B 01 L 3/00
The present search report has been drawn up for all claims			
Place of search		Date of completion of search	Examiner
The Hague		21 February 91	BINDON C.A.
CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons &: member of the same patent family, corresponding document			